

After structuring the metal coatings, the multiple substrate is transferred to an assembling or bonding machine by which the required electrical components are bonded to each of the adjoining panels so that a plurality of identical electrical circuits are obtained. Subsequently, the multiple substrate is separated into the individual circuits by breaking the ceramic layer along the predetermined breaking lines which had been provided in the ceramic layer before structuring the metal coatings of the adjoining panels. This technique is well-known to persons skilled in the art and is referred to in the prior art cited by the Examiner. A major drawback of the known technique is that the multiple substrate may break along the predetermined break lines during treatment, i.e. during masking and edging of the metal coatings, or during a bonding operation.

The present invention is intended to overcome this unwanted breaking by providing margin areas 1'' or 1''' at the periphery of the ceramic layer, each margin layer comprising an external additional metal surface 5-6 bridging the pre-determined breaking lines in between the adjoining panels, and also comprising an additional external predetermined breaking line 3', 4' with such additional breaking line defining the margin area and being formed in the ceramic layer between the additional metal surfaces and the remaining part of the ceramic layer which forms the adjoining panels.


The margin area provides for an additional security against unwanted breaking of the substrate along the predetermined breaking lines during handling of the multiple substrate, since breaking of the multiple substrate along the predetermined breaking lines in between the adjoining panels, will only be possible after the margin area has been broken away. Furthermore, during normal handling of a multiple substrate, the danger of unwanted breaking of the multiple substrate is greater in the middle of the substrate than at the periphery so that the probability of unwanted breaking along the external additional breaking line of the margin area is very low. The margin areas and additional metal surfaces of both these areas are not used

for producing electrical circuits, but are only provided for protection purposes.

The prior art cited by the Examiner refers only to the known multiple substrate technique, and does not show a multiple substrate having at least one margin area for protecting the substrate against unwanted breaking along the predetermined breaking lines in between the adjoining panels. The claims of the present application have been amended to more clearly recite what applicant regards as the invention. In view of the foregoing amendments and comments, favorable reconsideration is respectfully requested.

Submitted herewith is a petition for a one-month extension of time. Applicant hereby petitions for any other extensions of time and you are authorized to charge Deposit Account Number 08-2455 any fees necessary to maintain the pendency of the present application. If any issues remain which can best be solved by a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local telephone number listed below.

Respectfully submitted,



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